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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/253,153 02/19/99 SCHWABACHER

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HM22/0620

EXAMINER

GARCIA, M

ART UNIT

PAPER NUMBER

1627

DATE MAILED:

06/20/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

File copy

# Office Action Summary

Application No.  
**09/253,153**

Applicant(s)  
**Schwabacher**

Examiner  
**Maurie E. Garcia, Ph. D.**

Group Art Unit  
**1627**



☒ Responsive to communication(s) filed on May 1, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire THREE month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-36 is/are pending in the applicat

Of the above, claim(s) 8-36 is/are withdrawn from consideration

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-7 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☒ Raw Sequence Summary

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

### **DETAILED ACTION**

1. The Response filed May 1, 2000 (Paper No. 5) is acknowledged. No claims were amended, cancelled or added. Therefore, claims 1-36 are pending.

2. Applicant's election of Group I (claims 1-7) in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. The Restriction Requirement is made FINAL and claims 8-36 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to non-elected inventions. Claims 1-7 are examined on the merits.

#### ***Specification-Sequence Listing***

4. The examiner acknowledges the submission of the sequence listing. However, the application still fails to comply with the requirements of 37 CFR 1.821 through 1.825 due to errors in the sequence listing. These errors are set forth in the attached Error Summary. Correction of these errors is required.

***Drawings***

5. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed. The drawings are objected to by the draftsman under 37 C.F.R. 1.84 or 1.52. See PTO-948 for the details of these objections. Correction of the noted defects in the drawings can only be deferred until the application is allowed by the examiner.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Claim 1 is indefinite in reciting "pre-determined". It is unclear what is meant by this term as the method of determination is not defined by the claim and the specification does not provide a standard for ascertaining the requisite methodology. Therefore, one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

B. Claim 7 is indefinite because it is unclear what is meant by the term "one dimensional" in the context of the instant invention. Does the use of this terminology simply mean that the support is longer in one dimension than the others? What are the ratios of the dimensions that are considered to be

“one dimensional”? For the purposes of this action, the examiner is interpreting any elongated support to be “one dimensional”.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Fodor et al (US 5,510,270; listed on PTO-1449, Paper No. 2).

Fodor et al teaches a method for synthesizing oligomers on a solid support in predefined regions, thus forming “an array of chemical compounds” (see Abstract and Fig. 10M of the patent). Fodor et al teach both oligomers of both nucleotides and peptides (see, e.g. examples in column 28 and column 18 line 57 through column 19 line 13). The compounds in the array of Fodor are identified by their locations in the spatially defined array (see, for example, Fig. 15). The arrays of Fodor et al are subjected to reaction conditions such as coupling of amino acids (for example) by deprotection and activation. These steps “cycle” along the support as a function of a unique distance and (defined regions in the checkerboard pattern) and clearly involve more than one reagent. See, for

example, the section of Fodor et al beginning in column 27 line 19 through column 28 line 67.

Additionally, the examiner respectfully points out that claims 2 and 6 are product-by-process claims and that any "array of chemical compounds" reads on such claims. The process by which the claimed array is synthesized does not appear to lend patentable weight to the claimed invention. One of ordinary skill would expect the array to be the same regardless of the manner of synthesis.

10. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Lebl et al (EP 0 385 443 A2: listed on PTO-1449, Paper No. 2).

Lebl et al teaches a method for synthesizing oligomers on a solid support that is in the form of a band, thus forming "an array of chemical compounds" (see Abstract and Fig. 1, reference numeral 1 of the patent). The band carrier of Lebl et al is "led, e.g. by means of a series of rollers, through the appropriate reagents and washing solvents so that individual reactants are step-wise bonded" (see page 4, lines 30-34). Furthermore, in the process of Lebl the steps proceed at locally different sites (see page 4 lines 35-38). The arrays of Lebl et al are subjected to reaction conditions such as coupling of amino acids (for example) by deprotection and activation. These steps "cycle" along the support as a function of a unique distance and time (defined by the cycle through the system – see Figure 1 and page 5, lines 12-29) and clearly involve more than one reagent. See, for example, Example 10 of Lebl et al on page 9. Also, conventional protecting groups for

peptide chemistry are used in the syntheses (see, for example, page 4, lines 39-46). The carriers can be those such as thread (see claims 1 and 5 of Lebl et al) which are "one-dimensional" as interpreted above (Paragraph 6B).

Additionally, the examiner respectfully points out that claims 2-4 and 6 are product-by-process claims and that any "array of chemical compounds" reads on such claims. The process by which the claimed array is synthesized does not appear to lend patentable weight to the claimed invention. One of ordinary skill would expect the array to be the same regardless of the manner of synthesis.

*Status of Claims/Conclusion*

11. No claims are allowed.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maurie E. Garcia, Ph.D. whose telephone number is (703) 308-0065. The examiner can normally be reached on Monday-Thursday from 9:30 to 7:00 and alternate Fridays.
13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jyothsna Venkat, can be reached on (703) 308-2439. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4242.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

*J Venkat*  
JYOTHSAN VENKAT, Ph.D. SPE  
PRIMARY EXAMINER  
GROUP 1500-1627

Maurie E. Garcia, Ph.D.  
June 16, 2000